Prevalence of multi-drug resistance Mycobacterium tuberculosis in world population: Systematic review and meta-analysis

Rashid Ramazanzadeh a,*, Daem Roshani b, Samaneh Roohi c, Bahman Mohammadi c

a Cellular & Molecular Research Center and Microbiology Department, Faculty of Medicine, Kurdistan University of Medical Science, Sanandaj, Iran
b Department of Epidemiology & Biostatistics, Kurdistan Research Center for Social Determinants of Health (KRCSDH), Faculty of Medicine, Kurdistan University of Medical Science, Sanandaj, Iran
c Student Research Committee, Cellular & Molecular Research Center and Microbiology Department, Faculty of Medicine, Kurdistan University of Medical Science, Sanandaj, Iran

ABSTRACT

Background: Drug resistance is the major problem in tuberculosis (TB) treatment and control. In the present study, it was decided to consider the prevalence and distribution of multi-drug resistance Mycobacterium tuberculosis (MDR-TB) in Iran using meta-analysis based on systematic review of articles published, which will provide more detailed information to clearly overview the status of TB.

Methods: All original articles published in literature database including PubMed, ScienceDirect, Web of Science, Google Scholar, Biological abs, Iranmedex, and SID systematically reviewed the prevalence of MDR-TB. The summarized data has been analyzed statistically.

Results: Final analyses included 39 samples that have been selected from 535 studies. Overall MDR-TB prevalence in Iran was estimated to be 0.15 (95% CI = 0.14-0.16). Corresponding estimates by city were Mashhad 0.22 (95% CI = 0.18-0.27), Tehran 0.16 (95% CI = 0.15-0.17), and Zahedan 0.10 (95% CI = 0.07-0.15). In 2003 there was a high report of MDR-TB 0.88 (95% CI = 0.75-0.96).

Conclusions: According to the results, prevalence of MDR-TB in Iran is lower than worldwide WHO report. Effective control program is needed in order to control and eradicate the spread of drug resistance strains.

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